coemar

CF ZOOM AL

manuale di istruzioni instruction manual

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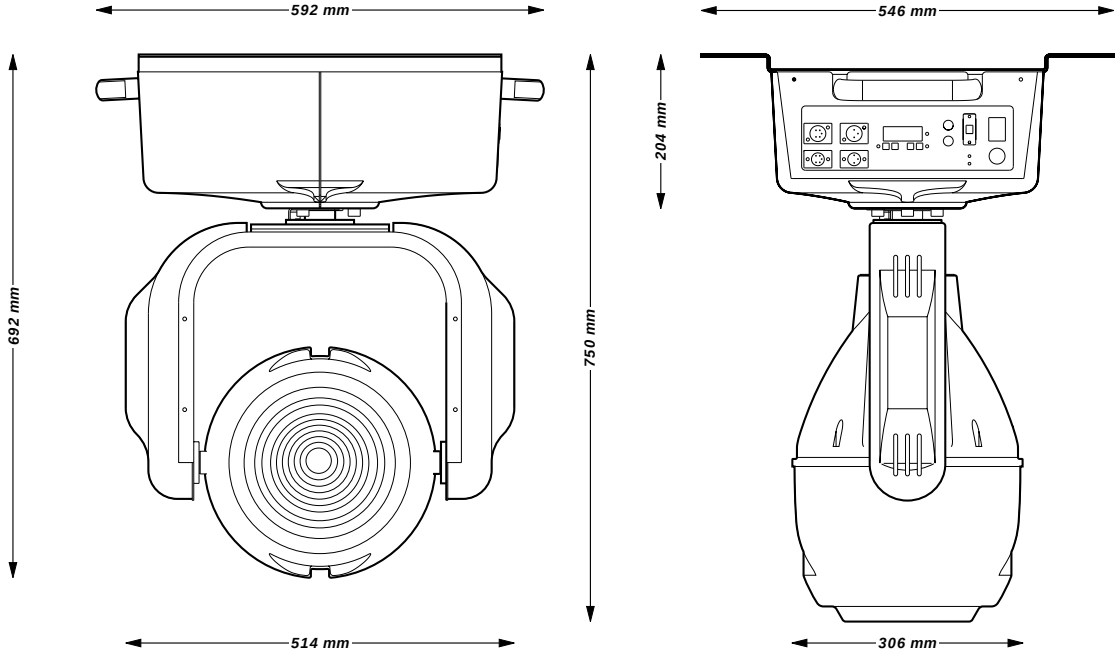
1st edition, january 1999

CF ZOOM AL



numero di serie/serial number

data di acquisto/date of purchase

fornitore/retailer

indirizzo/address

cap/città/suburb

provincia/capital city

stato/state

tel./fax/

Prendete nota, nello spazio apposito, dei dati relativi al modello e al rivenditore del vostro ***CF ZOOM AL****: in caso di richiesta di informazioni, pezzi di ricambio, servizi di riparazione o altro ci permetteranno di assistervi con la massima rapidità e precisione.*

Please note in the space provided above the relative service information of the model and the retailer from whom you purchased your ***CF ZOOM AL****: This information will assist us in providing spare parts, repairs or in answering any technical enquiries with the utmost speed and accuracy.*

ATTENZIONE*: la sicurezza dell'apparecchio è garantita solo con l'uso appropriato delle presenti istruzioni, pertanto è necessario conservarle.*

WARNING*: the security of the fixture is granted only if these instructions are strictly followed; therefore it is absolutely necessary to keep this manual.*

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Authorised coemar service centres worldwide

*Congratulations on having purchased a **coemar** product. You have assured yourself of a fixture of the highest quality, both in componentry and in the technology used. We renew our invitation to you to complete the service information on the previous page, to expedite any request for service information or spares (in case of problems encountered either during, or subsequent to, installation). This information will assist in providing prompt and accurate advice from your **coemar** service centre.*

1. Packaging

Following the instructions and procedures outlined in this manual will ensure the maximum efficiency of this product for years to come.

Open the packaging and ensure that no part of the equipment has suffered damage in transit. In case of damage to the equipment, contact your carrier immediately by telephone or fax, following this with formal notification in writing.

packing list

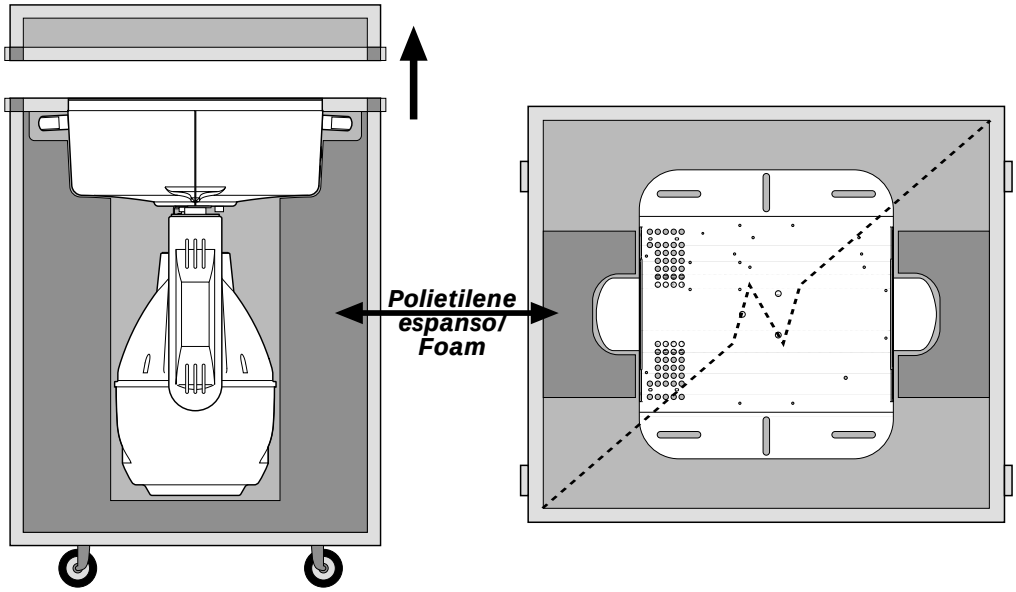
Ensure the packaging contains:

1 ***CF ZOOM AL***
1 ***instruction manual***
1 ***end stop –90°***

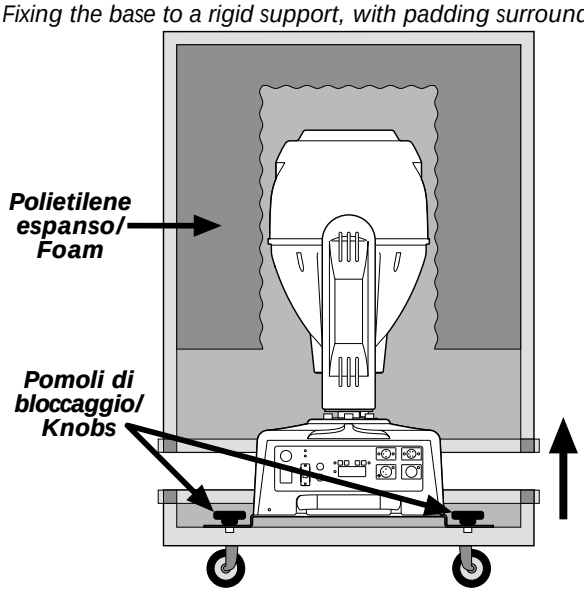
2. Transportation

The ***CF ZOOM AL*** should be transported in its original packaging or in a coemar approved flight case.
*In order to manufacture a suitable flight case, we recommend the follwing simple procedure be followed, which will stop the articulated movement of the **CF ZOOM AL**. Below are illustrated the 2 diverse methods of padding which we recommend:*

A) Padding around teh entire projector, including the base, with suitable padding materials.



B) Fixing the base to a rigid support, with padding surrounding the articulated head.



3. Important safety information

Fire prevention:

1. ***CF ZOOM AL*** *utilises a Philips Fabolux 500W 55v; the use of any alternative lamp is not recommended and will null and void the fixture's warranty.*
2. *Never locate the fixture on any flammable surface.*
3. *Minimum distance from flammable materials: 0,5 m.*
4. *Minimum distance from the closest illuminable surface: 2 m.*
5. *Replace any blown or damaged fuses only with those of identical values. Refer to the schematic diagram if there is any doubt.*
6. *Connect the projector to mains power via a thermal magnetic circuit breaker.*

Prevention of electric shock:

1. *High voltage is present in the internals of the unit. Isolate the projector from mains supply prior to performing any function which involves touching the internals of the unit, including lamp replacement.*
2. *For mains connection, adhere strictly to the guidelines outlined in section 7 of this manual.*
3. *The level of technology inherent in the* ***CF ZOOM AL*** *requires the use of specialised personnel for all service applications; refer all work to your authorised* ***coemar*** *service centre.*
4. *A good earth connection is essential for proper functioning of the projector. Never operate the unit without proper earth connection.*
5. *The fixture should never be located in an exposed position, or in areas of extreme humidity. A steady supply of circulating air is essential.*

Safety:

1. *The projector should alwasy be installed with bolts, clamps, and other fixings which are suitably rated to support te weight of the unit.*
2. *Always use a secondary safety chaing of a suitable rating to sustain the weight of the unit in case of the failure of the primary fixing point.*
3. *The external surface of the unit, at various points, may exceed 150°C. Never handle the unit until at least 10 minutes have elapsed since the lamp was turned off.*
4. *Always replace the lamp if any phusical damage is evident.*
5. *Never install the fixture in an enclosed area lacking sufficient air flow; the ambient temperature should not exceed 35°C.*
6. *A hot lamp may explode. always wait for at least 10 minutes to elapse after the unit has been turned off prior to attempting to replace the lamp. Always wear suitable hand protection when handling the lamp.*

4. Lamp: Installation and replacement

CF ZOOM AL *utilises a Philips Fabolux 500W 55V lamp with a GX 9,5 lampbase*
The lamp is available from your authorised ***coemar sales agent****:*

coemar cod.	***105071***
wattage	*500 W*
luminous flux	*11.880lm*
colour temperature	*3200° K*
base	*GX 9,5*
approximate life	*200 hours*

Attention
Turn off the power prior to opening up the unit.

The fixture's internal temperature can reach 250° C after 5 minutes, with a maximum peak of 350° C; ensure that the lamp is cold prior to attempting removal. The fixture should be allowed to stand and cool for 10 minutes prior to its removal.
The lamp is part of the tungsten halogen family of incandescent lamps and must be handled with great care. The lamp operates at high temperature, and the slight risk of explosion of the lamp exists if operated over its recommended life of 200 hours.
We recommend, therefore, that the lamp be replaced within the manufacturer's specified lamp life.

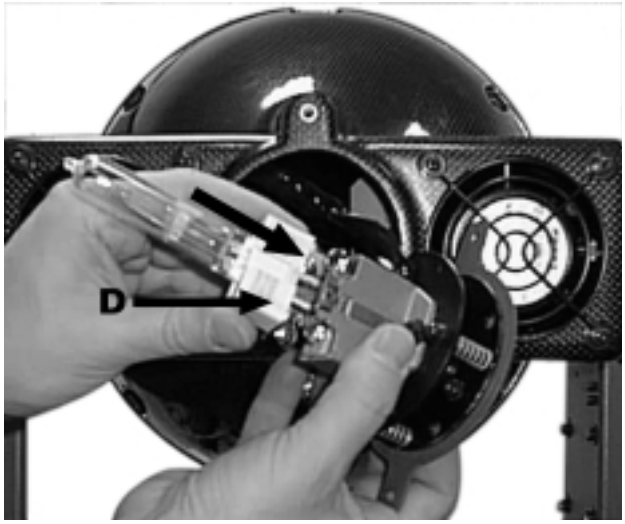
mounting the lamp

1) *Using a 3mm hex (Allen) key, remove the two hex bolts (**A**) which affix the lamp assembly to the rear of the projector.*

2) *Remove the lamp assembly (**B**).*

3) *Locate the lampholder (**C**)*

4) *The GX 9,5 lampholder is symmetrical in construction; the lamp used is manufactured from quartz glass and should be handled with care; always adhere to the instructions supplied in the lamp's packaging. Never touch the glass directly, use the tissue provided in the lamp's packaging.*
*Insert the lamp (**D**) into the lampholder (**C**). DO NOT USE UNDUE FORCE. In case of difficulty, re-read the instructions and repeat the procedure.*

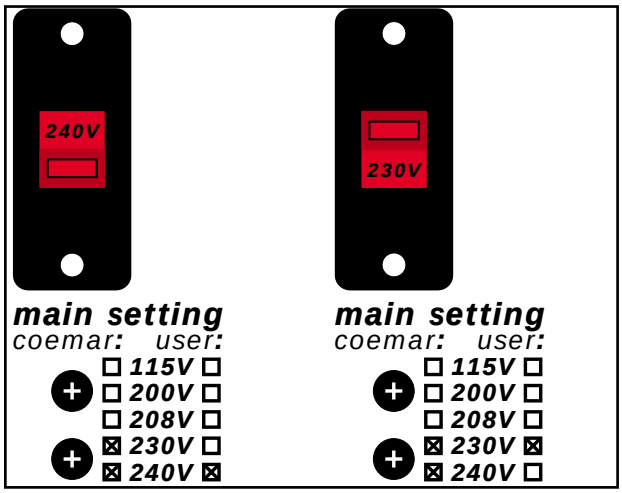


5) *Replace the lamp assembly (**B**) into its original position and replace and tighten the two screws (**A**) which were previously removed.*

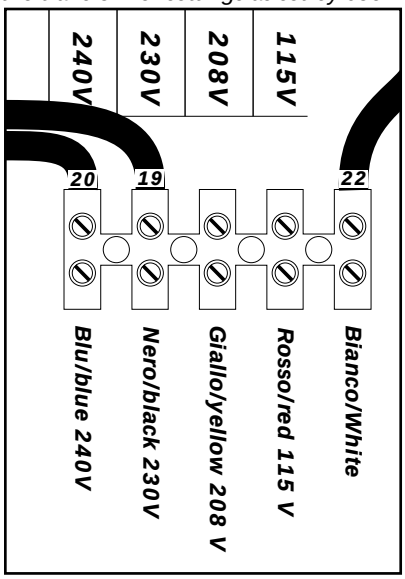
***Attention:** we recommend that the lamp be realigned in the optical train of the unit to avoid overheating of the dichroic filters and other internal components of the unit. refer to section 13 for instructions about this procedure.*

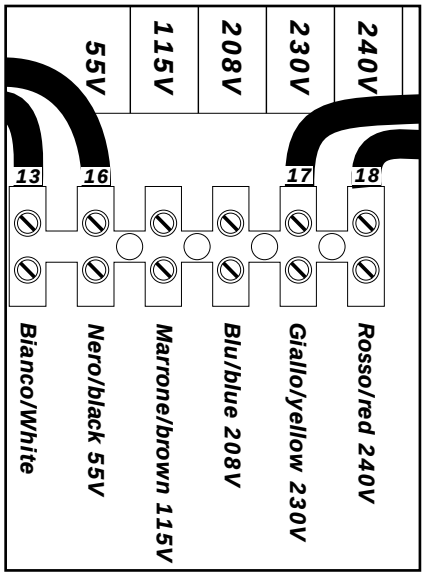
5. Operating voltage and frequency

coemar *factory presets (barring specific requests), a voltage of 230v and 240v selectable via the switch on the base of the* ***CF ZOOM AL****.*

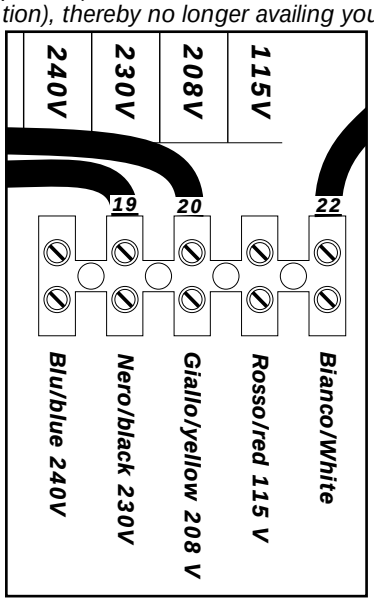


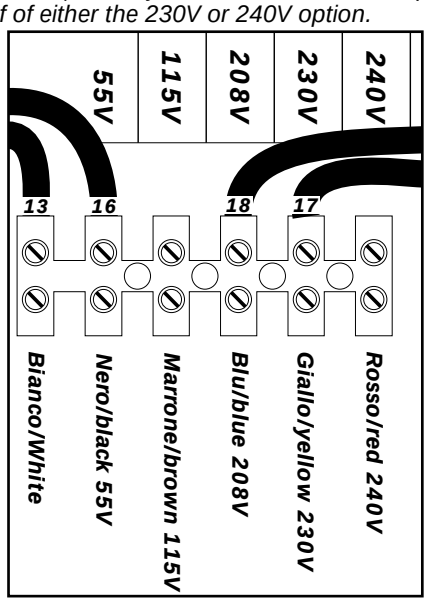
Remember to switch the selector (230 or 240V) to the position which best matches the average voltage available at your particular venue. The following diagrams show the transformer settings as set by coemar.



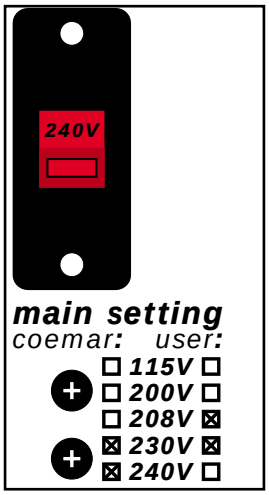


If your required operating voltage is 208V, you may select this internally within the unit by moving the cables numbered 20 and 18 (currently connected in the 240V position) or the cables numbered 19 and 17 (currently connected in the 230V position), thereby no longer availing yourself of either the 230V or 240V option.





Having altered the settings as required, mark the corresponding position on the sticker located near the on/off switch as shown in the figure below:



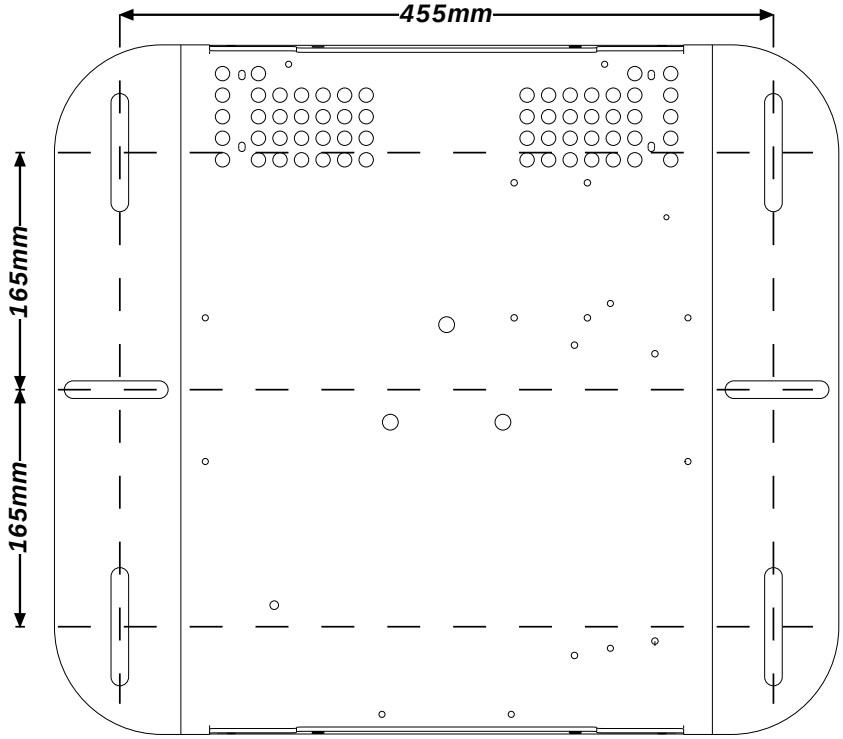
Incorrect voltage selection will detrimentally affect the operation of the projector.Under no circumstance should you move the cables numbered 22,16 and 13.
The operating voltage, as distinct from the input voltage, does not need to be altered.

6. Mounting the unit

mounting

The CF ZOOM AL *may be either floor or ceiling mounted.*
The structure from which the unit is hung should be of sufficient rating to hold the weight of the unit, as should any clamps used to hang the unit.
The structure should also be sufficiently rigid so as not to move or shake whilst the ***CF ZOOM AL*** *moves during its operation.*

The mounting holes in the base of the unit allow it to be mounted at various angles to the mounting truss and to trusses of various dimensions.
The following is a diagram outlining the base of the ***CF ZOOM AL****.*



n° 6 asole 72x12 mm r= 6 mm

Note that in order to take advantage of the full articulated movement of the projector, it should be installed with the label marked " Lato frontale/ Front" facing towards the main item to be illuminated; in this manner the "0" or "home" position of the ***CF ZOOM AL*** *will be in the most efficient position.*

protection against liquids

The projector contains electric and electronic components that must not come into contact with water, oil, or any other liquid.

movement

The projector has a movement of 370° in the base and 280° in the yoke; ***DO NOT place any obstructions in the path of the projector's movement.***

safety chain

The use of a safety chain (cod. 069) - fixed to the ***CF ZOOM AL*** *and to the primary suspension point, is highly recommended to protect against accidental failure, however unlikely, of the primary suspension point.*
If using an after-market safety chain not manufactured by ***coemar****, ensure that it is of sufficient rating to hold the weight of the fixture.*

risk of fire

Each fixture produces heat and must be installed in a well-ventilated position. The minimum recommended distance from flammable material is: 0.5m. Minimum distance from the object being illuminated is: 2 m.

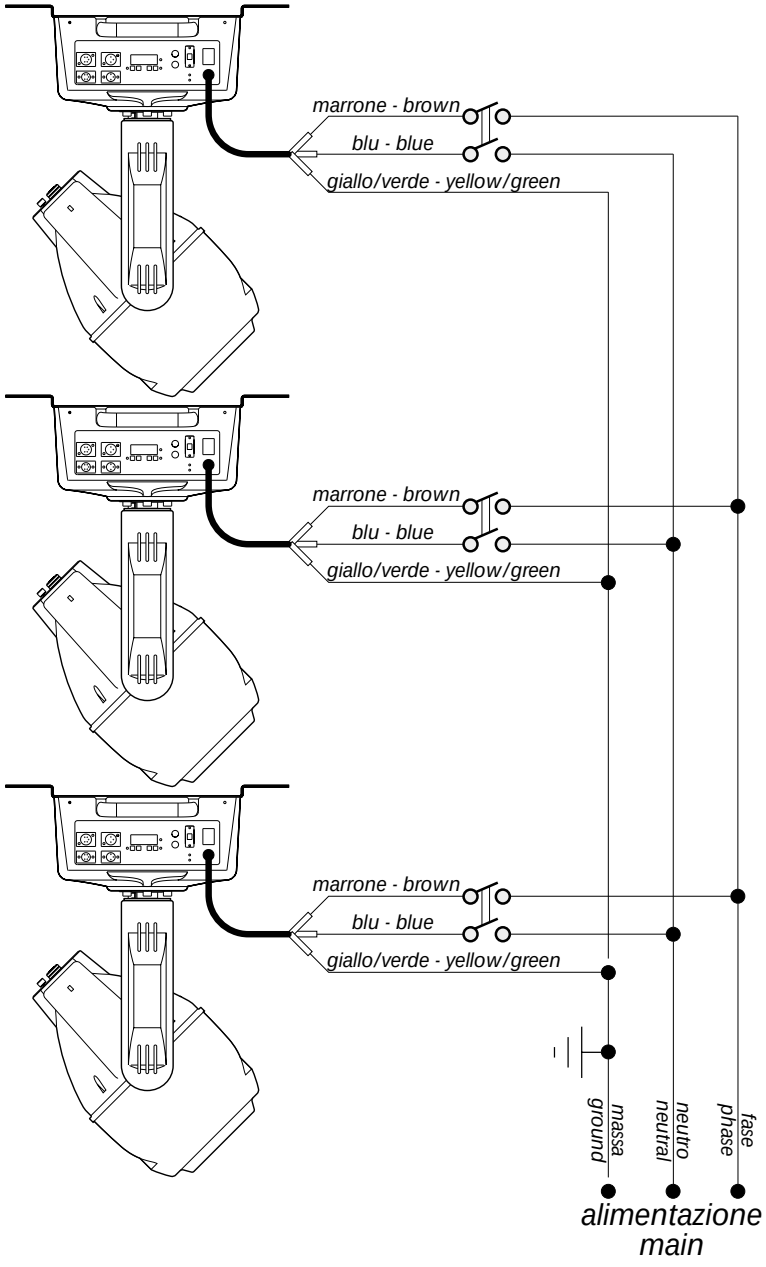
Mains connection

cabling

The mains cable provided is thermally resistant, complying to the most recent international standards. It meets or exceeds the VDE and IEC norms, IEC 331, IEC 332 3C,CEI 20 35.
NB: In case of cable replacement, similar cable with comparable thermal resistant qualities must be used exclusivelly (cable 3x1.5 ø external 10 mm, rated 300/500V, tested to 2KV, operating temperature -40° +180°, ***coemar*** *cod. CV5309).*

mains connection

The CF ZOOM AL *can operate at voltages from 208V-230V-240V at 50 or 60Hz (operating voltage and frequency can be selected as described in section 5 of this manual).*
Prior to connecting the unit to your mains supply, ensure that the model in your possession correctly matches the mains supply available to you.
For connection purposes, ensure your plug is of a suitable rating: 3,5 amps.
Locate the mains cable which exits the base of the unit and connect as shown below:



protection

The use of a thermal magnetic circuit breaker is recommended for each ***CF ZOOM AL****. A good earth connection is essential for the correct operation of the fixture. Strict adherance to regulatory norms is strongly recommended.*

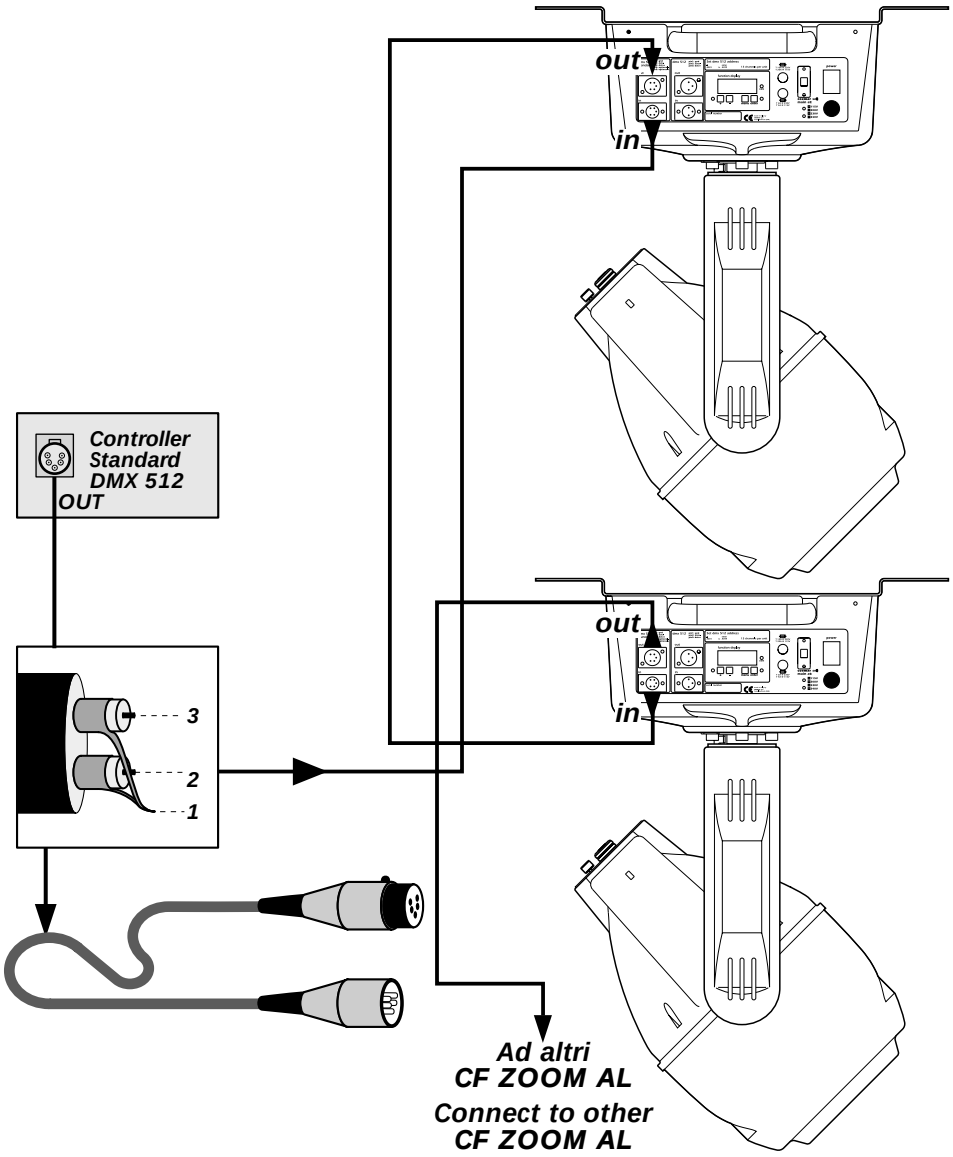
8. Signal connection

Control signal is digital, and is transmitted via two pair screened ø0.5mm cable. Connection is serial, utilising XLR 3 or XLR5 male and female sockets located on the base of the ***CF ZOOM AL****, labeled* ***DMX 512*** *and* ***DMX 512 standard*** *(see diagram).*

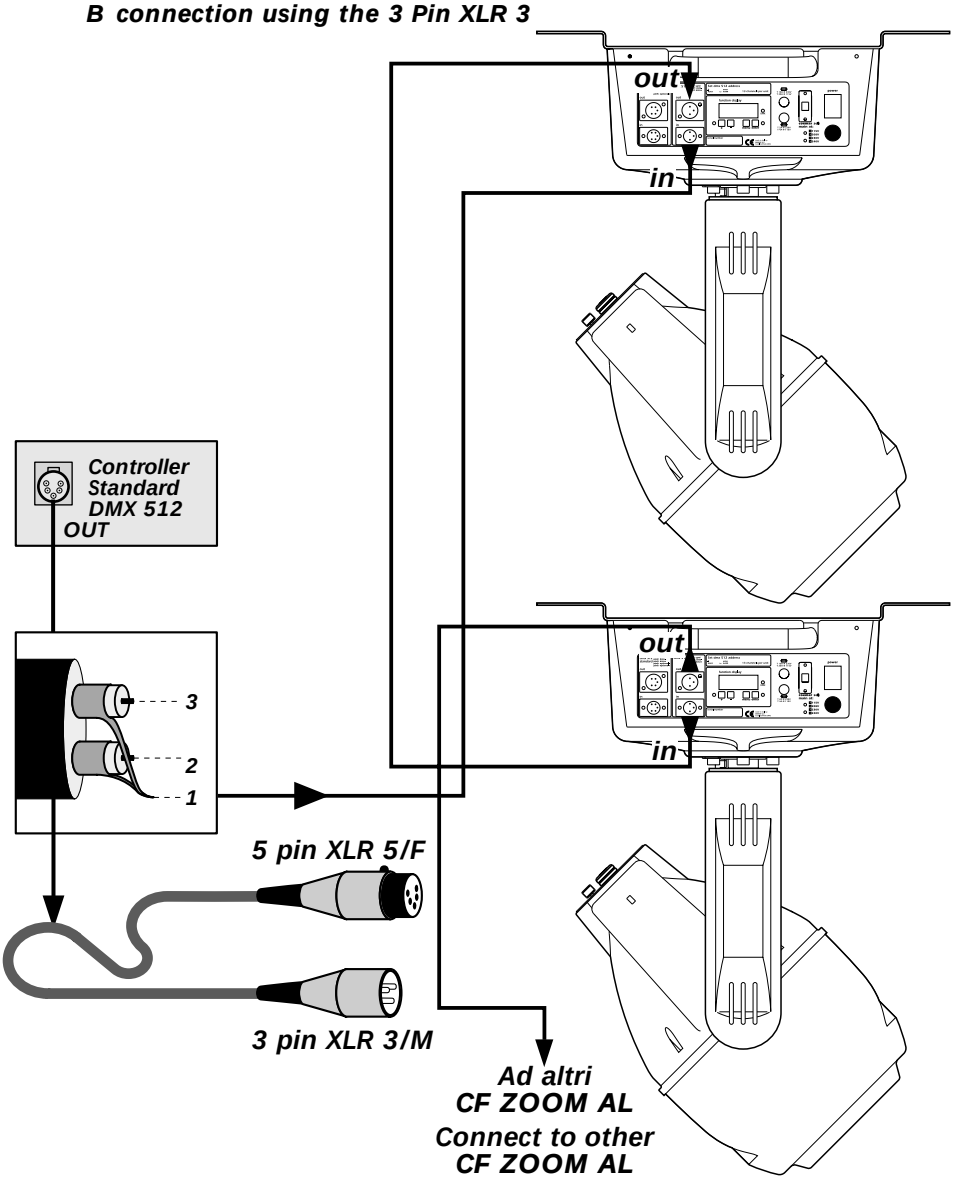
Pin connections conform to the international standard:

pin 1= screening 0 volt
pin 2= data -
pin 3= data +
pin 4= not connected
pin 5= not connected

A connection using the 5 Pin XLR 5



B connection using the 3 Pin XLR 3

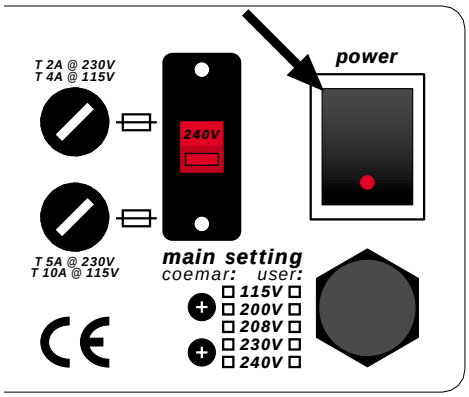


Ensure that all data conductors are isolated from one another and the metal housing of the connector.

Note: the housing of the cannon XLR 3 or 5 must be isolated.

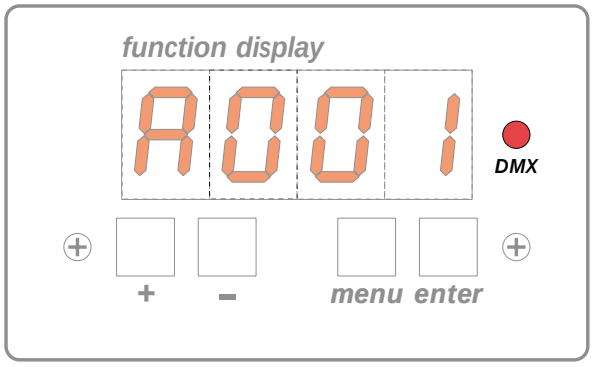
9. Powering up

After having followed the preceding steps, turn on the DMX 512 controller which will be used to control the ***CF ZOOM AL.*** *Following this, turn on the power to the projector, and turn on the projector's power switch.****The projector will perform a reset function on all the internal and external motors. This will last some few seconds, after which it will be subject to the external signal from the controller.***



DMX led

The DMX ***led*** *will be static on to indicate that* ***DMX 512*** *signal is being correctly received by the projector.*



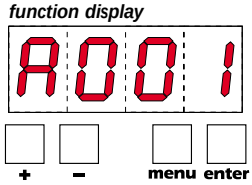
If the led is off, the projector is not receiving signal. check the cabling and the functioning of the controller.

10. DMX addressing

*Each **CF ZOOM AL** utilises **13 channels** of **DMX 512** signal for complete control. To ensure that each projector accesses the correct signal, it is necessary to correctly address each fixture. Any number between 1 and 495 can be generated via the multifunction panel of the **CF ZOOM AL**.*
*This procedure myst be carried out on every **CF ZOOM AL**. being used*
*When powered up initially, each projector will show **A001** which indicates **DMX address 1**; a projector thus addressed will respond to commands on channels **1** to **13** from the **DMX 512 controller**. A second projector should be addressed as **14**, a third as **27** and so on until the final **CF ZOOM AL has been addressed.***

Altering DMX addresses

1) *Press the **+** or **–** button until the display shows the **DMX** required, the characters in the display panel will flash to indicate that the selection is not stored in memory.*



2) *Press the **enter** button to confirm your selection; the display will stop flashing and the projector will now respond to the new DMX address.*
3) *To better understand the function of each channel, we refer you to section 12 "Control channel functions from a DMX 512 controller".*

***Important Note**: Keeping the **+** or **–** button pressed will cause the display to alter at increased speed, allowing a faster selection to be effected.*

*By pressing the **–** button, you may inadvertently select a DMX address which is not being communicated to the fixture by the controller, for example 500. If this is the case, the display will slow the data reception, (since it does not exist), and you will note that it is slow to respond to your commands (for example altering an address or requesting or confirming a reset). You may solve this problem by either sengin data to this address, or by altering the incorrect DMX setting of the **CF ZOOM AL in question**.*

11. Display panel functions

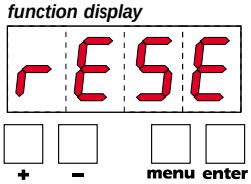
*The display panel at the rear of the **CF ZOOM AL** is used to display and set function information and various parameters.*
*Altering the **coemar** factory settings may vary the functioning of the projector, causing it to not respond to external **DMX 512** signal. Please read and familiarise yourself with the following information very carefully before altering any selections.*

reset

This function causes a reset to occur in the case (however unlikely) that one or more of the motors should lose its reference point.

*1) Press the **menu** button.*
*2) Press the **+** or - button until the display shows **rESE** (for reset).*

function display



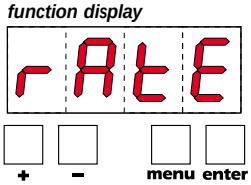
*3) Press the **enter** button to confirm your selection; all the motors will perform a reset.*

rate

*This function provides information on the speed or rate of DMX 512 signal being received by the **CF ZOOM AL**.*

*1) Press the **menu** button.*
*2) Press the **+** or - button until the display shows **rAtE** (for rate/speed).*

function display



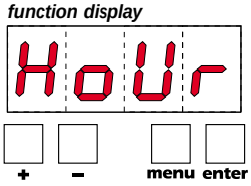
*3) Press the **enter** button to confirm your selection; il display visualizza un valore numerico che è la velocità di trasmissione del segnale **DMX 512**.*

Hour

*Allows the number of hours that the fixture has been operating, or more particularly, the number of hours that the **CF ZOOM AL** has been powered up to more than 10% of its operating voltage. This number therefore is able to indicate the approximate total number of hours that the **CF ZOOM AL** has been in usage. The **Hour** parameter is useful, above all, in providing the user with an accurate idea of the fixture's usage thereby allowing them knowledge of preventative servicing requirements and lamp usage which may be useful in avoiding down time during busy periods of usage of the fixture.*

*1) Press the **menu** button.*
*2) Press the **+** or - button until the display shows **HoUr** (for hour).*

function display



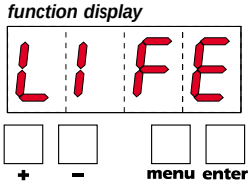
*3) Press the **enter** button to confirm your selection; the display will show a numerical value which is the number of hours that the CF ZOOM AL has been powered up by at least 10% of its operating voltage.*

life

This function provides information on the number of hours of operation of the lamp in the unit.

*1) Press the **menu** button.*
*2) Press the **+** or - button until the display shows **LIFE** (for lamp life).*

function display



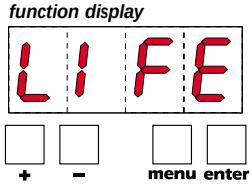
*3) Press the **enter** button to confirm your selection; the display will show a numerical value which is the length of time in hours that the lamp has been operated at more than 10% of its operating voltage since the counter was last reset.*

resetting the lamp life counter

The lamp life counter needs to be reset to zero at every lamp change to provide accurate information on lamp life

1) *Turn off the projector*
2) *Power up the **CF ZOOM AL** whilst simultaneously holding down the **+** and **–** buttons.*
3) *Press the **menu** button.*
4) *Press the **+** or - button until the display shows **LIFE** (for lamp life).*

function display



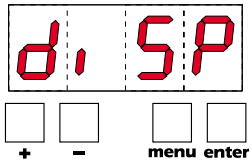
5) *Press the **enter** button to confirm your selection; the display will show 0000 confirming that the counter has been reset.*

disp

*This function inverts the led display panels output. This allows for the display panel to be easily read whether the unit is operated as a floor mounted fixture, or being hung (see section **6. "Mounting the unit"**).*

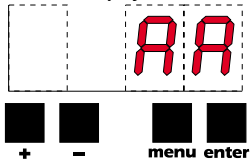
1) *Press the **menu** button.*
2) *Press the **+** or - button until the display shows **diSP** (for display).*

function display



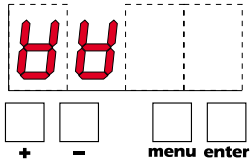
3) *Press the **enter** button to confirm your selection; the display will show **AA** (for hanging fixture installation).*

function display



4) *Press the **+** or - button the display will show* ∀∀ *(for floor mounted installation).*

function display



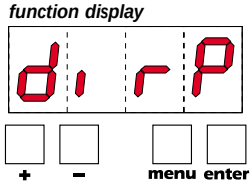
5) *Press the **enter** button after either step 3 or 4 to confirm your choice of display mode.*

dirp

This function inverts the movement for horizontal (pan) movements.

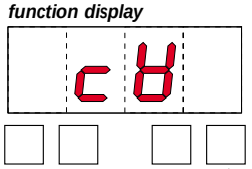
1) *Press the **menu** button.*
2) *Press the **+** or - button until the display shows **dirP** (for pan direction).*

function display



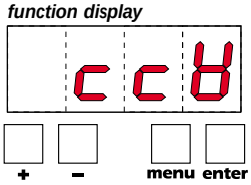
3) *Press the **enter** button to confirm your selection; the display will show **cW** (for clockwise).*

function display



4) *Press the **+** or **– button**; the display will show **ccW** (for counterclockwise).*

function display



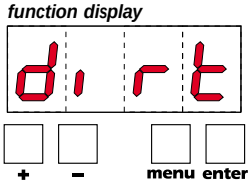
5) *Press the **enter** button after either step 3 or 4 to confirm your choice of direction.*

dirt

This function inverts the movement for vertical (tilt) movements.

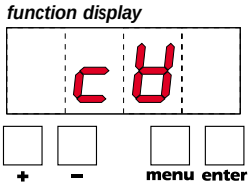
1) *Press the **menu** button.*
2) *Press the **+** or - button until the display shows **dirt** (for tilt direction).*

function display



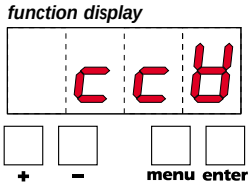
3) *Press the **enter** button to confirm your selection; the display will show **cW** (for clockwise).*

function display



4) *Press the **+** or **– button**; the display will show **ccW** (for counterclockwise).*

function display



5) *Press the **enter** button after either step 3 or 4 to confirm your choice of direction.*

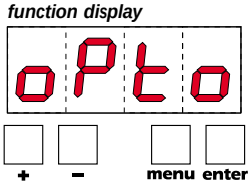
oPto

This function allows the sensors which read the instantaneous pan and tilt positions of the fixture to be switched on or off.
*With the sensors activated (**opto ON**) the projector will automatically return to its correct position in case it is accidentaly moved out of position.*
*With the sensors deactivated (**opto OFF**) the projector will not return automatically to its correct position if it is accidentaly moved out of position.*

NOTE:** there will be a noticeable difference in the projector at startup; with **opto ON** the reset procedure will take but a few seconds; the reset can last up to a minute with the **opto oFF.

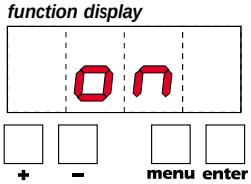
1) *Press the **menu** button.*
2) *Press the **+** or - button until the display shows **oPto***

function display



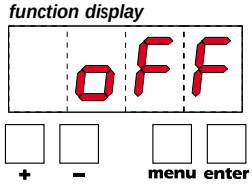
3) *Press the **enter** button to confirm your selection; the display will show **on** (opto activated).*

function display



4) *Press the* **+** *or* **– *button****; the display will show* ***oFF*** *(opto deactivated).*

function display



5) *Press the* ***enter*** *button after either step 3 or 4 to confirm your choice.*

N.B. *We recommend that the opto be deactivated only if it is obviously defective and requires replacement.*

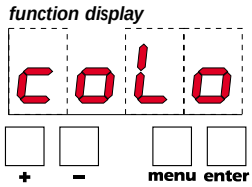
coLo

This function allows the colour wheel to be used in a proportional manner via DMX 512 signal.

1) Press the ***menu*** *button.*

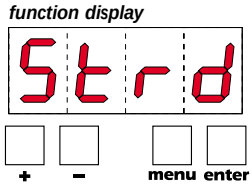
2) Press the **+** *or - button until the display shows* ***coLo*** *(for colour wheel).*

function display



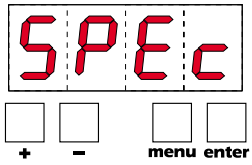
3) Press the ***enter*** *button to confirm your selection; the display will show* ***Strd*** *(for standard) which corresponds to the automatic centring of the colours on the colour wheel in the optical path of the unit. A change in the DMX 512 signal corresponds to a colour change by the* ***CF ZOOM AL****.*

function display



4) Press the **+** *or* **– *button****; the display shows* ***SPEc*** *(for special) which corresponds to the proportional selection of the colour on the colour wheel (split colours are thereby possible)*

function display



5) Press the ***enter*** *button after either step 3 or step 4 to confirm your choice of colour selection.*

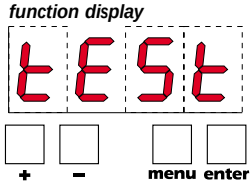
tESt

This function allows for a test sequence to be carried out on the respective motors of the unit in the absence of any DMX signal.

1) Press the ***menu*** *button.*

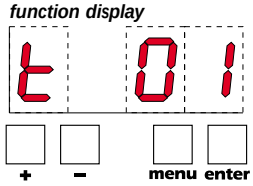
2) Press the **+** *or - button until the display shows* ***tESt*** *(for test).*

function display



3) *Press the **enter** button to confirm your selection; the display will show **t 01** (for test number 1). Press the **+** or **–** buttons for subsequent tests from **t 01** to **t 12**.*

function display



In these tests the projector simulates the reception of a DMX 512 signal which is increasing from 1 to 255 on the selected channel.

***t 01**= movement in the X-axis*
***t 02**= fine movement in the X-axis*
***t 03**= movement in the Y-axis*
***t 04**= fine movement in the Y-axis*
***t 05**= no function*
***t 06**= opening/closing of the blackout/strobe shutter*
***t 07**= zoom*
***t 08**= rotating the effects wheel including diffusor*
***t 09**= rotating the colour wheel*
***t 10**= cyan*
***t 11**= magenta*
***t 12**= yellow*
***t 13**= no function*

4) *Press the **enter** button to confirm your selection of test to be carried out.*

12. DMX 512 signal functions

*If all procedures have been correctly carried out to this point, the 13 channels of your **DMX 512** controller will have full control over all the effects available from your **CF ZOOM AL** as described in the following table:*

channel	function	type of control	effect	decimal
1	**Base (pan) coarse**	proportional	coarse control of the base movement	0-255
2	**Base (pan) fine**	proportional	fine control of the base movement	0-255
3	**Yoke (tilt) coarse**	proportional	coarse control of the Yoke movement	0-255
4	**Yoke (tilt) fine**	proportional	fine control of the Yoke movement	0-255
5	**dimmer**	step	lamp off	0-128
		step	Lamp on	129-255
6	**shutter**	step	closed	0-9
		proportional	strobe effect increasing flash rate	10-127
		proportional	random strobe, increasing flash rate	128-247
		step	open	248-255
7	**Beam size**	proportional	from flood to spot	0-255
8	**filter selection**	proportional	white clear	0-15
		proportional	filter 1 vertical alteration of adjustable beam angle	16-217
		proportional	filter 3 adjustable	218-255
9	**color wheel**	step	WHITE	0-24
		step	color 1	25-49
		step	color 2	50-73
		step	color 3	74-99
		step	color 4	100-123
		step	color 5	124-151
		proportional	continuos color wheel rotation clockwise with proportional speed from min. to max.	152-255
NOTE: channel 9 function can be varied selecting color standard/special function on the back function display				
9	**color wheel**	step	white clear	0- 9
		proportional	proportional 360° color wheel rotation .	10- 151
		proportional	continuos color wheel rotation clockwise with proportional speed from min. to max.	152-255
10	**cyan**	step	white clear	0-9
		proportional	proportional cyan control from white to cyan	10-255
11	**magenta**	step	white clear	0-9
		proportional	proportional magenta control from white to magenta	10-255
12	**Yellow**	step	white clear	0-9
		proportional	proportional yellow control from white to yellow	10-255
13	**function**	step	No effect	0-19
		step	pan/tilt go to sensor	20-100
		step	all motor reset	101-240
		step	No effect	241-255
note 1: 2 or 4 numbers close to the end limit levels cannot be used as unstable levels				
note 2: function channel has a delay time of 6 second to prevent accidental activation.				

13. Aligning the lamp in lamp in the optical system

Aligning the lamp in the optical system is achieved via the 2 adjusters at the rear of the projector.
This procedure should be undertaken to properly align the lamp in the optical system and to avoid the possible overheating of the internal components due to the incorrect focusing of the beam onto components not intended to be exposed to this.

alignment procedure

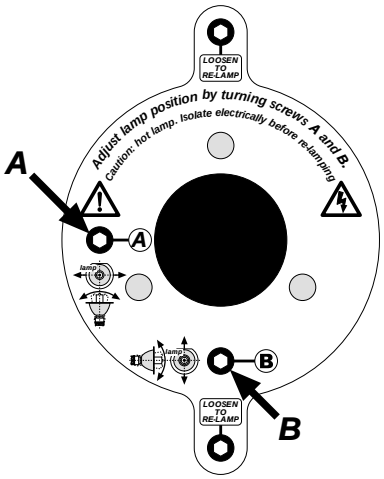
*Alignment is effected via the 2 adjusters **A** and **B** operating in conjunction with each other. The lamp should be on and not dimmed, black-out fully open, and no colour filters inserted.*
*If the lamp is not correctly aligned, a hot-spot will be noticeable. This is a function of the lamp's positioning. Use the two adjusters (**A** and **B**) to bring the hot-spot to the centre of the beam and to flatten the beam to maximum uniformity.*

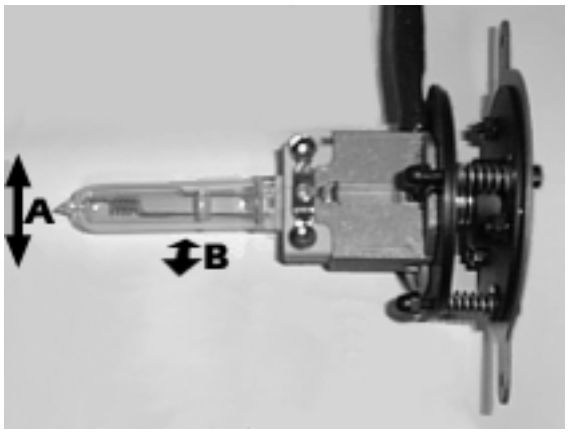
vertical adjustment

*Adjuster (**B**) acts on a lever and spring assembly to position the lamp via a vertical movement within the reflector; rotate it until correct positioning is achieved.*

horizontal adjustment

*Adjuster (**A**) acts on a lever and spring assembly to position the lamp via a horizontal movement within the reflector; rotate it until correct positioning is achieved.*

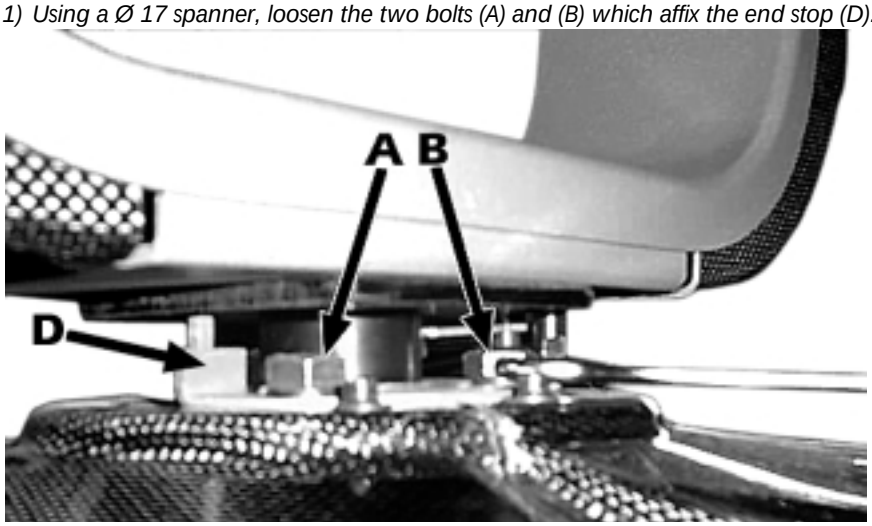




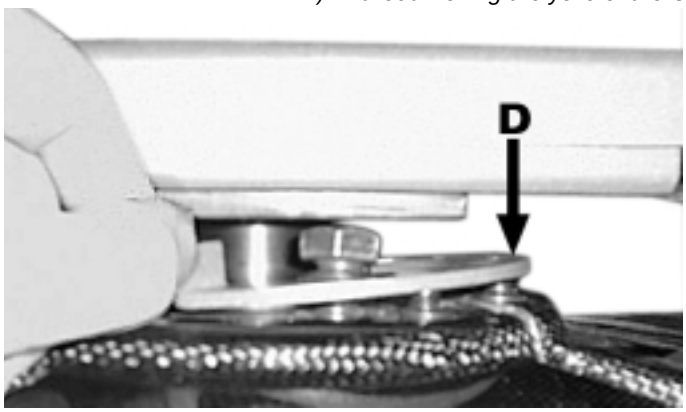
14 Moving the reset home position by 90°

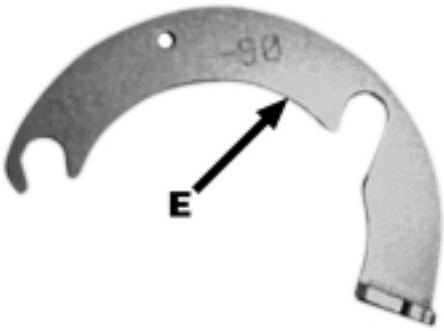
In the packaging for this unit ***coemar*** *has supplied an optional end stop (8752.71) which allows the reset/home position to be moved by 90°.*
To replace the end stop, complete the following procedure:

1) Using a Ø 17 spanner, loosen the two bolts (A) and (B) which affix the end stop (D).

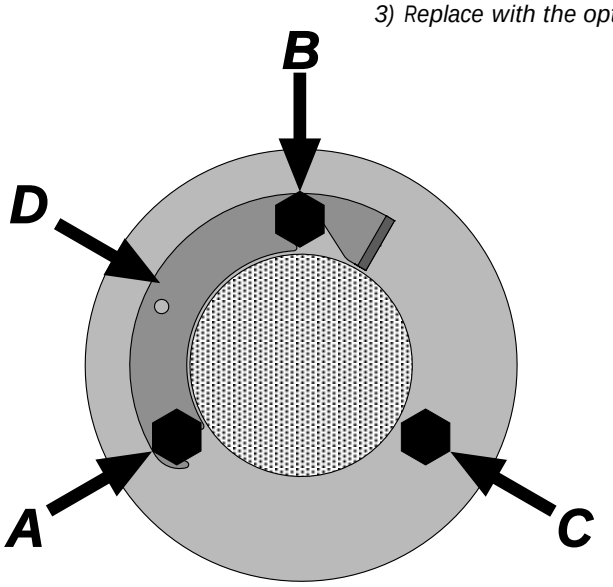


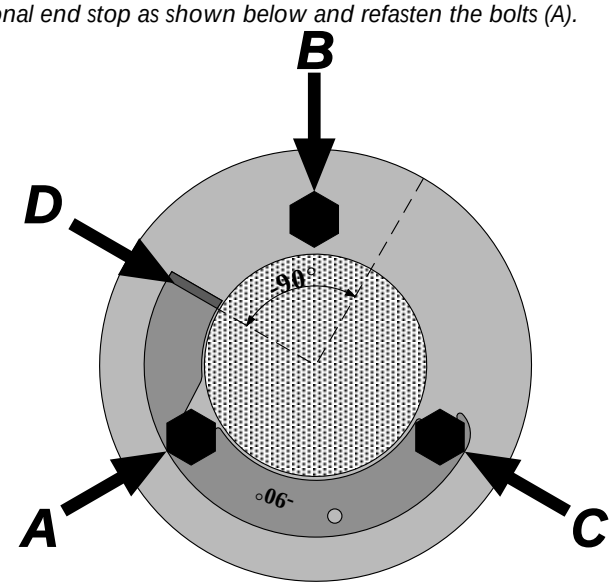
2) Without moving the yoke of the ***CF ZOOM AL*** *remove the existing end stop (D).*





3) Replace with the optional end stop as shown below and refasten the bolts (A).





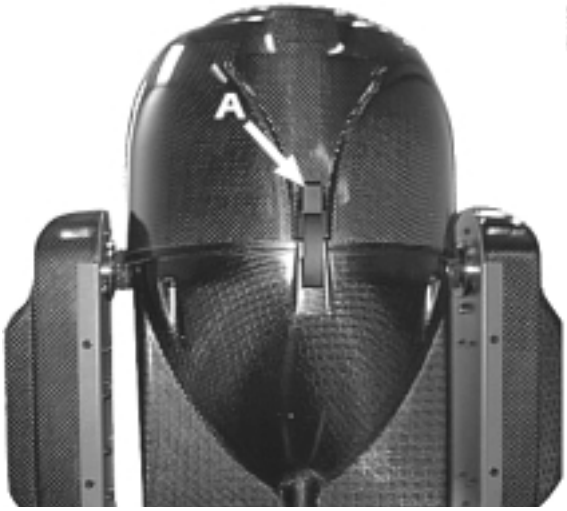
15. Replacing dichroic filters

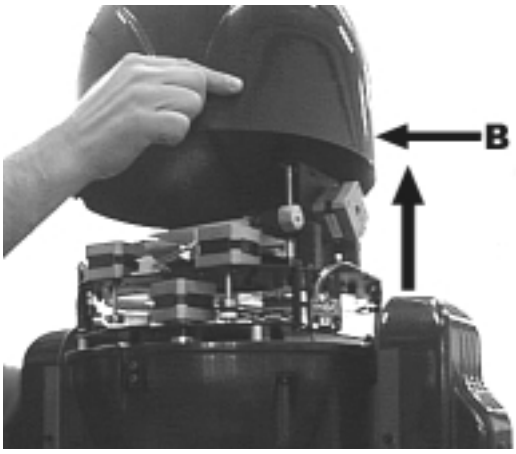
Dichroic filters on the colour wheel may be replaced at will; note that any replacements must be Ø 45mm, thickness 1.1 mm and made from tempax high temperature-resistant glass.

> ***Attention***
> *Disconnect mains power prior to attempting any replacement procedure.*

replacing a dichroic filter

*1) Remove the inspection lid A of the projector via the two clips **A** as shown below.*

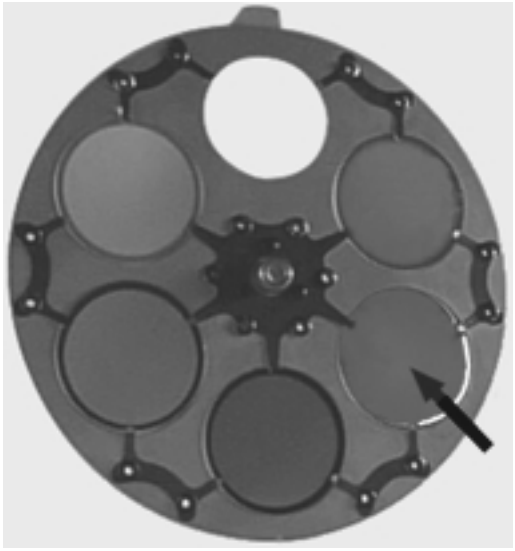




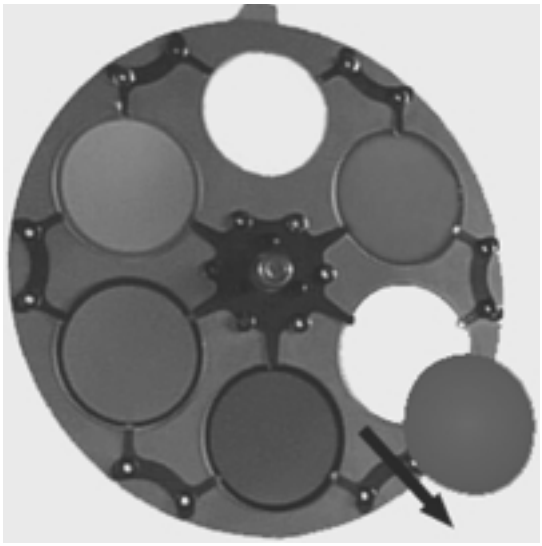
2) Locate the dichroic colour wheel

3) Manually rotate the colour wheel until you locate the colour you wish to replace.
4) Rotate the colour wheel until you reach the empty slot.

5) *Remove the dichroic filter by sliding the filter gently up and towards the central retaining clips, thus releasing it from the two clips on the outer edge of the wheel.*



6) *Slide out the filter.*



7) *Insert the new colour filter by first sliding it under the central retaining clip, then sliding it back under the outer clips, ensuring that it is seated correctly in the colour wheel.*
8) *Replace the* ***CF ZOOM AL*** *inspection lid.*

16. Automatic internal functions

*The **CF ZOOM AL** has several automatic functions and features which at first glance may not be noticed. However, they serve to add functionality to the projector, and to assist in extending the serviceabilty of the unit.*

thermal protection

*A thermal sensor in the body of the **fixture** protects it against overheating.*
The thermal sensor operates by removing voltage to the lamp if the ambient temperature rises above a preset maximum due to either less than ideal air circulation around the fixture or in the event of cooling fan failure.

automatic realignment

*An internal 4 point encoder system allows the **CF ZOOM AL** to return to its correct position in case the unit is accidentally knocked out of alignment whilst operating. This is particularly useful if the projector is to be mounted on the floor in a position where the performer or artist may accidentally bump the unit.*
***NOTE:** this facility may be deactivated if desired (see section 11 'Display panel functions').*

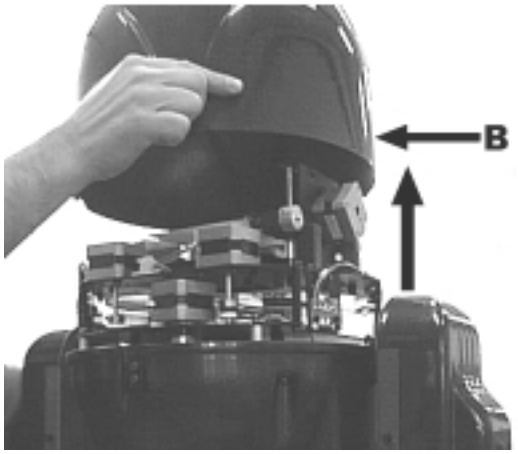
17. Maintenance

*Whilst every possible precaution has been taken to ensure the trouble-free operation of your **CF ZOOM AL**, the following periodic maintenance is highly recommended.*

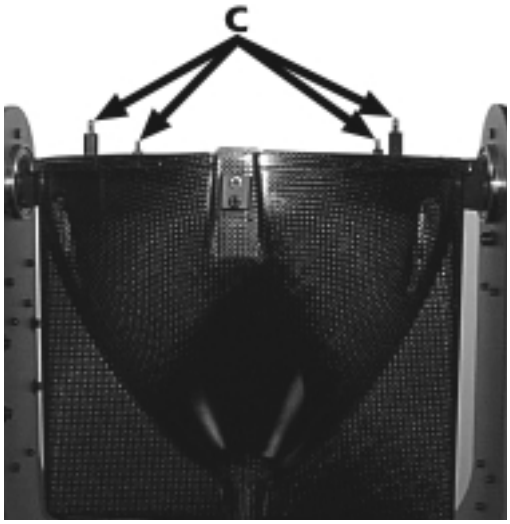
Attention
Disconnect mains power prior to opening the inspection lid

Opening the projector:

The front inspection lid allows complete access to the projector's internals.



*For more detailed access to the unit remove the 4 screws (**C**), disconnect all 8 motor, sensor and thermal contacts.*



After this simple procedure, the whole motor assembly may be totally removed.

fuse replacement

Fuse replacement

*Locate the fuse, which protects the lamp and electronics, in the base of the **CF ZOOM AL**.*

Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type if necessary.

periodic cleaning

lenses and reflectors

Even a fine layer of dust can reduce the luminous output substantially. Regularly clean all lenses and the reflector using a soft cotton cloth, dampened with a specialist lens cleaning solution.

fans and air passages

The fans and air passages must be cleaned approximately every 6 weeks; the period for this periodic cleaning will depend, of course, upon the conditions in which the projector is operating. Suitable instruments for performing this type of maintenance are a brush and a common vacuum cleaner or an air compressor.

periodic maintenance

lamp

The lamp should be replaced if there is any observable damage or deformation due to heat. This will avoid the danger of the lamp exploding.

mechanicals

Periodically check all mechanical devices for wear and tear; gears, guides, belts, etc., replacing them if necessary. Periodically check the lubrication of all components, particularly the parts subject to high temperatures. If necessary, lubricate with suitable lubricant, available from your coemar distributor.

electrical components

Check all electrical components for correct earthing and proper attachment of all connectors, refastening if necessary.

18. Electronic alignment of motors

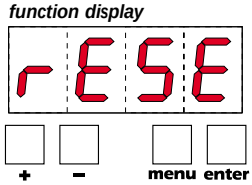
*The display panel at the rear of the **CF ZOOM AL** allows for the electronic alignment of the projector's motors. This procedure is performed by **coemar** at the factory. It may be useful to perform this procedure in the case of internal components being replaced.*
Altering the factory settings may redically alter the functioning of the projector. Carefully read all of the following prior to attempting any changes.

electronic calibration

***Important Note**: electronic calibration is only possible if the projector is connected to a **DMX 512** source.*

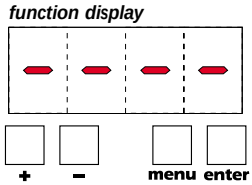
1) *Press the **menu** button.*
2) *Press the **+** or **–** button until the display shows **rESE** (for reset).*

function display



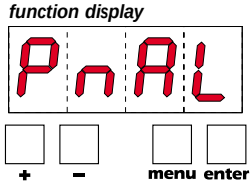
3) *Press the **enter** button to confirm your selection then immediately and simultaneously press and hold the **menu button**, holding both pressed for at least **30** seconds. The motors of the unit will perform a reset and the display will show the following for some few seconds, indicating that you have entered the electronic calibration mode:*

function display



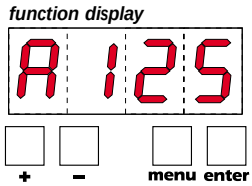
*Press the **+** or **–** button until the display shows **PnAL** (for pan alignment, movement of the base motor of the unit).*

function display



2) *Press the **enter** button to confirm your selection; the display will show a numerical value which corresponds to the factory preset.*

function display

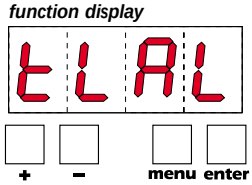


3) *Press the **+** or **–** button until the numerical value corresponds with the correct alignment of the unit (note that with each press of the **+** or **–** button the motor will move).*
4) *Press the **enter** button to confirm your selection.*

tLAL

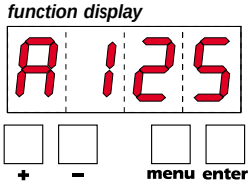
1) *Press the **+** or **–** button until the display shows **tLAL** (for tilt alignment, movement of the yoke).*

function display



2) *Press the **enter** button to confirm your selection; the display will show a numerical value which corresponds to the factory preset.*

function display

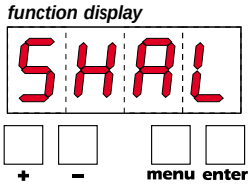


3) *Press the **+** or **–** button until the numerical value corresponds with the correct alignment of the unit (note that with each press of the **+** or **–** button the motor will move).*
4) *Press the **enter** button to confirm your selection.*

SHAL

1) *Press the **+** or **–** button until the display shows **SHAL** (for alignment of the black-out shutter).*

function display

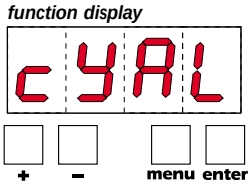


2) *Press the **enter** button to confirm your selection; the display will show a numerical value which corresponds to the factory preset.*
3) *Press the **+** or **–** button until the numerical value corresponds with the correct alignment of the black-out shutter in the optical path of the projector.*
4) *Press the **enter** button to confirm your selection.*

cYAn

1) *Press the **+** or **–** button until the display shows **cYAn** (for alignment of the cyan colour).*

function display

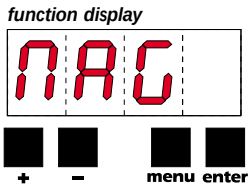


2) *Press the **enter** button to confirm your selection; the display will show a numerical value which corresponds to the factory preset.*
3) *Press the **+** or **–** button until the numerical value corresponds to the perfect alignment of the cyan colour in the optical path of the projector.*
4) *Press the **enter** button to confirm your selection.*

MAG

1) *Press the **+** or **–** button until the display shows **MAG** (for alignment of the magenta colour).*

function display

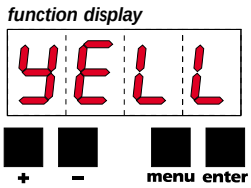


2) *Press the **enter** button to confirm your selection; the display will show a numerical value which corresponds to the factory preset.*
3) *Press the **+** or **–** button until the numerical value corresponds to the perfect alignment of the magenta colour in the optical path of the projector.*
4) *Press the **enter** button to confirm your selection.*

YELL

1) *Press the **+** or **–** button until the display shows **YELL** (for alignment of the yellow colour).*

function display

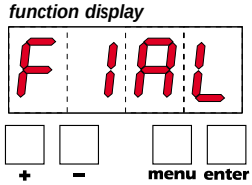


2) *Press the **enter** button to confirm your selection; the display will show a numerical value which corresponds to the factory preset.*
3) *Press the **+** or **–** button until the numerical value corresponds to the perfect alignment of the yellow colour in the optical path of the projector.*
4) *Press the **enter** button to confirm your selection.*

FiAL

1) *Press the **+** or **–** button until the display shows **FiAL** (for alignment of the beam shaping filter effects wheel).*

function display

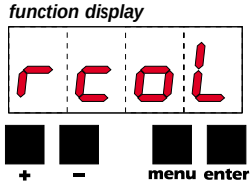


2) *Press the **enter** button to confirm your selection; the display will show a numerical value which corresponds to the factory preset.*
3) *Press the **+** or **–** button until the numerical value corresponds with the correct alignment of the beam shaping effects wheel in the optical path of the projector.*
4) *Press the **enter** button to confirm your selection.*

rcoL

1) *Press the **+** or **–** button until the display shows **rcol** (for alignment of the colour wheel).*

function display

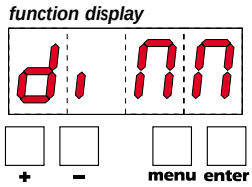


2) *Press the **enter** button to confirm your selection; the display will show a numerical value which corresponds to the factory preset.*
3) *Press the **+** or **–** button until the numerical value corresponds with the correct alignment of the colour wheel in the optical path of the projector.*
4) *Press the **enter** button to confirm your selection.*

diMM

1) *Press the **+** or **–** button until the display shows **diMM** (for dimmer preheating).*

function display

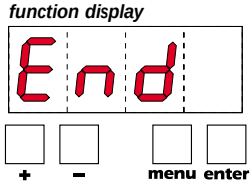


2) *Press the **enter** button to confirm your selection; the display will show a numerical value which corresponds to the factory preset.*
3) *Press the **+** or **–** button until you have reached a minimum level of output from the fixture when channel 5 is at 0. This procedure allows for lamp life to be prolonged by maintaining the filament of the lamp in a state of preheating thus avoiding thermal shock to the filament.*
4) *Press the **enter** button to confirm your selection.*

END

1) *Press the **+** or **–** button until the display shows **END** (for completion of the electronic alignment procedure)*

function display



2) *Press the **enter** button to confirm your selection. The display will revert to its normal operating mode and the internal memory will record all changes made.*

***Important Note**: At the termination of the above electronic calibration procedure, if the END function is not performed, no memory changes will be effected. This allows the operator to abort any changes made, in case of operator error.*

19. Spare parts

*All the components of the **CF 1200 Hard Edge** are available as replacement spares from your authorised **coemar** sales agent.*
Accurate description of the fixture, model number, and type will assist us in providing for your requirements in an efficient and effective manner.

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coemar *si riserva il diritto di apportare modifiche senza preavviso.*
coemar *reserves the right to effect modifications without notification*

manuale istruzioni
instruction manual

CF ZOOM AL

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